1: Linton E-5 (1926-27) 1933 FY8 Tanala FY8

243 no taboo against wet rice, but rarely raise it, because of the labor
[173] involved. The Zafimaniry still have a strong taboo against it. According to their own tradition, they were the last of the Menabe gentes to settle in the territory. They originally lived in the Ankaratra, a mountainous part of the plateau, and raised wet rice, like the other tribes of this area. Enemies attacked them when their men were dispersed, repairing their rice terraces. They were driven out of their territory and, when they re-established themselves, they tabooed wet rice cultivation, which they held responsible for the calamity. The taboo is so strong that when Betsileo immigrants began to cultivate wet rice in their country, some twenty-five or thirty years ago, they broke down the terraces and destroyed the crop.

Tanala wet rice culture is still crude in comparison with that of the plateau tribes. They do not use fertilizer, sow in seed beds, or transplant. Terrace systems are still very rare. The soil of a natural swamp is turned over with spades to a depth of about 1 foot, all but the largest vegetation being dug in. Cattle are then driven back and forth over the plot until the earth is churned to a soft muck. The rice is sown broadcast but not trodden in. Later, the crop is weeded once or twice. The harvest sacrifice is the same as for the *tavy*.

241 In addition to rice and the plants grown in the *tavy*, the Menabe
245 grow bananas, sweet potatoes and sugar cane. None of these are of great economic importance. Bananas are planted in or near the village, often in solitary clumps. The young plants are sometimes fenced to protect them from pigs, but require no other care. The fruit is small and of indifferent quality. It is cut green and hung up over the fireplace, where it soon becomes blackened with smoke. It is allowed to become soft and thoroughly ripe, then eaten raw. The plantain seems to be unknown.

286 The Tanala do not use banana fiber. The Betsileo, their neigh-
171 bors, formerly used it extensively in weaving and raised certain varieties of banana almost exclusively for it. They claim that it was the first material woven by them.

244 Sweet potatoes are grown from the shoots. Bunches of these are planted in holes at intervals of about 2 feet. The ground is not prepared. New patches may be weeded a month or two after planting, but the growth of the vines is so luxuriant that they soon strangle all other vegetation. The plants begin bearing in six to eight months and continue to produce for two or three years, after which the tubers become small and fibrous. The roots are dug a few at a time, as

1: Linton E-5 (1926-27) 1933 FY8 Tanala FY8

287 of softer wood (Fig. 14, a). Both sides of the head are covered with cross-hatching. The anvil is a rectangular piece of wood about 8 inches wide, 6 inches thick, and 16 to 18 inches long, with a smooth, flat top.

After the first beating, the bark is laid on the earth in a damp, shady place and left for three or four days. It absorbs moisture and when it has become damp and flexible it is beater. a second time. The material is then ready for use. It is not washed at any stage of the manufacture. The beating expands the bark to, at most, three times its original width. In making smocks, blankets, etc., these strips are sewn together with fiber thread.

The finished bark cloth is reddish brown in color, fading to a pinkish tan on exposure to the sun. It is rather stiff and thicker than any Oceanic bark cloth. It plainly shows the marks of the beater (Fig. 14, b). Apparently it is never painted or otherwise decorated.

MANUFACTURE OF CLOTH

•286 173 According to their own traditions the Tanala were originally ignorant of weaving. The Ikongo and other southern Tanala dressed in mats, like the southeast coast tribes, and still do so except where they have obtained cloth through trade. The Menabe dressed in bark cloth, but adopted weaving shortly before the beginning of the historic period and now dress entirely in cloth. The art entered the Menabe territory from two directions. Raffia weaving was learned from the neighboring Betsimisaraka tribe and gradually spread to all the gentes. *Hafotra* weaving, on the other hand, was brought into the area by the Zafimaniry when they fled from the plateau. It has spread little, if at all, among the other gentes, although the neighbors of the Zafimaniry purchase and use the finished product.

286 The preparation of raffia has been described under Forest Products. When it is to be manufactured into cloth, it is first shredded into thin filaments. This is done by tying one end of a hank to a post and combing it with an iron comb. These combs usually have four sets of teeth, used for shredding to different sizes (Fig. 14, d). After shredding the filaments are tied end to end to form a continuous thread, the ends of the knots being cut as short as possible with a small iron knife. The tying is done on a frame, two types being used. One of these consists of a raffia midrib through one end of which a stick is thrust at right angles while a second stick is driven into the upper surface near the other end. The whole form is reminiscent of a cross-bow (Fig. 14, e). The thread is passed over one

I: Linton E-5 (1926-27) 1933 FY8 Tanala FY8

286
287

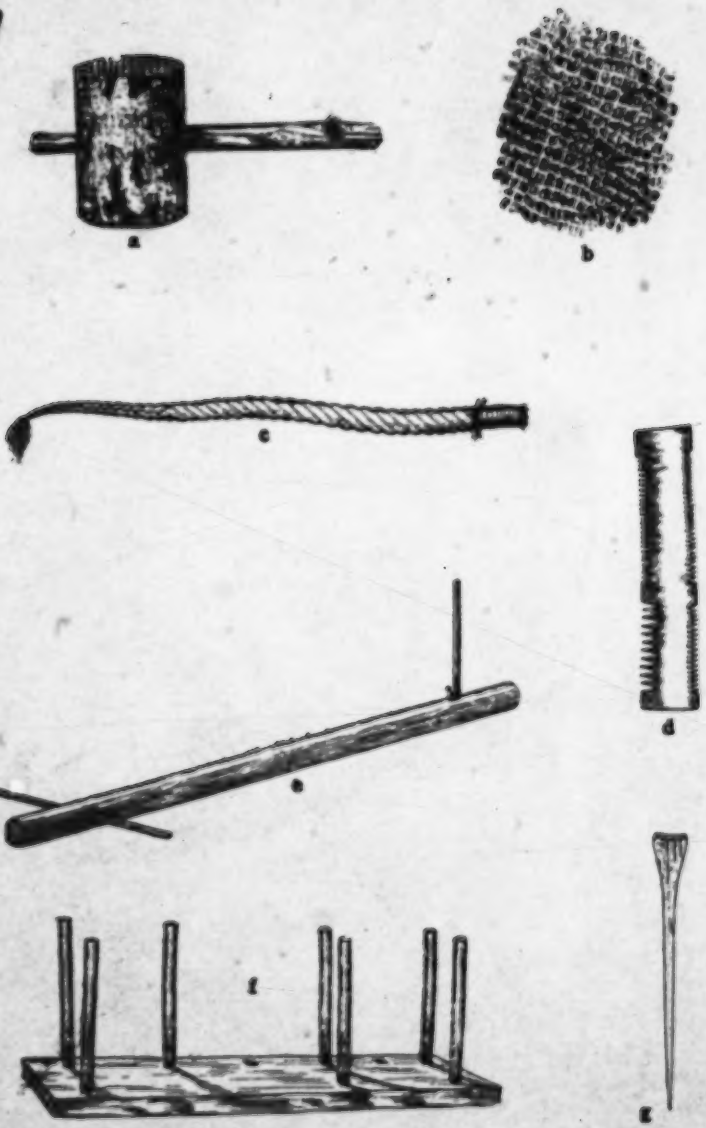

FIG. 14. Bark Cloth and Raffia Weaving. a, Bark Cloth Beater; b, Texture of Bark Cloth; c, Twist of Raffia; d, Comb for Shredding Raffia; e, f, Frames for Laying Raffia Chain for Weaving; g, Bone Bodkin.

1: Linton E-5 (1926-27) 1933 FY8 Tanala FY8

286 arm, around the vertical stick, over the other arm, and back, new lengths being knotted on as needed. The other frame consists of a plank with two rows of holes into which pegs about 8 inches long are fitted. The arrangement of the pegs can be changed to give hanks of different lengths (Fig. 14, f). When enough of the filaments have been knotted on, the hank is removed and laid aside to be dyed. The plateau method of boiling raffia with lye and then twisting it into thread seems to be unknown.

386 [177] 824 At the present time European aniline dyes have almost supplanted the original vegetable colors in raffia weaving and only a few of the older women know the native processes. Black is made by crushing the leaves of the *lalona*, boiling them and adding ferruginous earth. When the mixture is cold the raffia is put in and soaked for a day. This gives a fine and very fast color which continues in regular use in spite of the imported dyes. Yellow is made with turmeric. The root is pounded in a mortar, mixed with cold water, and the raffia steeped in it for half a day to a day, according to the depth of color desired. It is then washed in running water and dried. This dye is still occasionally used. A good orange dye was formerly made from the roots of the *vazavaritra*, a bush or small tree. The bark from the roots was pounded to powder in a mortar and boiled for an hour with the raffia, which was then washed. This dye was never used with *hafotra*, but simply because the plant grows in the territory of the raffia weaving gentes and sparsely if at all in that of the Zafimaniry. Red was made by boiling the raffia with the bark of the *nato* tree, and a pale grayish blue was made with indigo. The *vazavaritra*, *nato*, and indigo dyes are rarely used today. All dyeing is done before the fabric is woven.

286 531 The Tanala make a very limited use of differential warp dyeing. After the chain is ready for the loom groups of threads are drawn together and tightly wrapped with raffia. The chain is then dyed, the exposed portions taking the color while the others remain uncolored. Stripes with alternate plain and colored sections are made in this way, but there are no real designs and dyeing with several colors is unknown. The technique is rarely used and only one example was collected. Threads of mixed color are made by twisting together two filaments dyed in different colors, as black and yellow.

286 The loom (*tenona*) used in raffia weaving is identical with the oldest Betsimisaraka type (Fig. 15, a). The modern Betsimisaraka type, with treadles, is unknown. The warp is laid on the loom continuously, passing round and round both beams. Tension is secured

1: Linton E-5 (1926-27) 1933 FY8 Tanala FY8

286

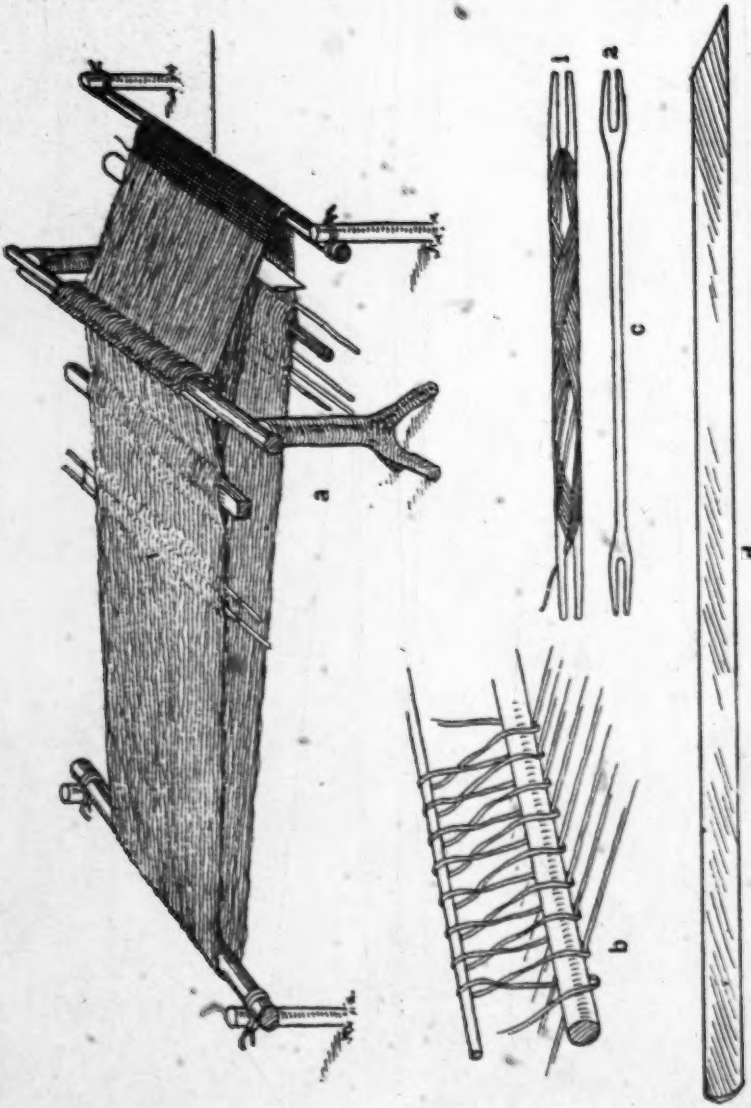

FIG. 18. Raffia Weaving. a, Loom for Raffia Weaving; b, Detail of Leash; c, Shuttles; d, Weaving Sword.

1: Linton E-5 (1926-27) 1933 FY8 Tanala FY8

286 by tying the beams at their ends to four low posts set in the ground. Beams and heddle rod are round and the heddle rod is relatively heavy. The leash, made from untwisted raffia, is continuous. It is wound around the heddle rod and a second much smaller rod which rests on the top of the heddle rod, in a series of figure eights (Fig. 15, b). The shed stick is oblong in section and about twice as wide as it is thick. Laze rods, made from two strips of bamboo fastened at the ends with a single turn of raffia fiber, are inserted about 18 inches beyond the shed stick, being moved along as the work progresses. The shuttle is very long, in some cases almost the width of the loom, and has forked ends (Fig. 15, c). It is usually of wood, but sometimes of bamboo. The weft thread is wound on it spirally, making either one or two complete turns between the ends. The sword is a long, straight-edged piece of wood pointed at one end and straight at the other (Fig. 15, d). The weaver squats behind the breast beam. Either three or four laze rods are first inserted and pushed close together, to give resistance to the sword. The heddle rod is then raised to form the shed. When in this position its ends are supported on short rests, usually made from stalks of manioc with a few root stubs left attached. When the shuttle has been thrown and the thread beaten in, the heddle rod is slipped off the rests, and the shed stick is turned to form the counter shed. A small, pointed piece of bone or wood is drawn rapidly back and forth across the warp to separate odd and even threads (Fig. 14, g). Both shuttle and sword are inserted from the right side. When a section of cloth has been woven, it is wound backward over the breast beam, gradually passing along the bottom of the loom and up over the warp beam. The laze rods inserted to give resistance are left in place until the cloth is finished. When all but a few inches of the warp has been woven, the remaining portion is cut across and the cloth removed.

286 531 Nearly all Tanala raffia cloths are decorated with simple stripes made by introducing bands of different-colored thread into the warp. The weft is of uniform color and usually undyed. Checked patterns are produced by having bands of the same colors in both the warp and weft. They are rather rare and do not appear to be ancient. At the present time the most prized cloths are made with a warp of dyed raffia, usually black with colored stripes, and a weft of commercial cotton thread. A few bands of the same thread are often introduced into the warp to give clear white stripes. The stripes are commonly arranged in such a way as to give a border along

1: Linton E-5 (1926-27) 1933 FY8 Tanala FY8

286
291

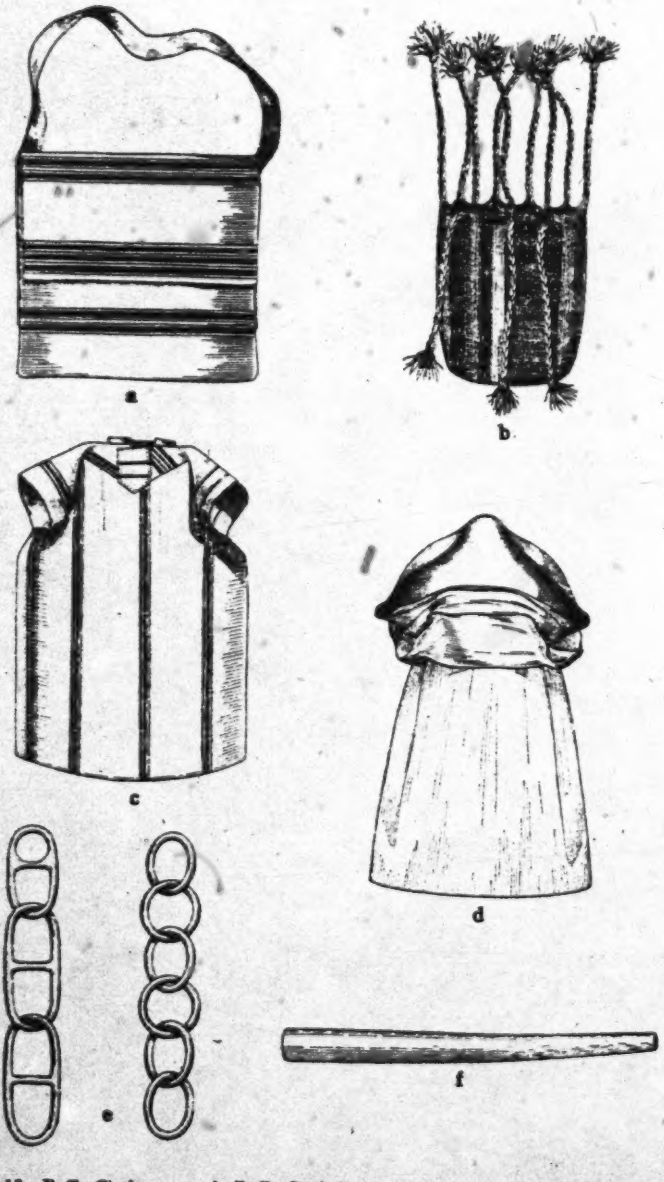

FIG. 16. Raffia Cloth, etc. a, b, Raffia Cloth Bags; c, Man's Smock, Raffia Cloth; d, Woman's Dress, Raffia Cloth; e, Wooden Chains for Rolling *Hafotra*; f, *Hafotra* Cloth Beater.

1: Linton E-5 (1926-27) 1933 FY8 Tanala FY8

286 531 one edge of the fabric. When the cloth is to be made into a woman's dress, the long strip which has come from the loom is cut in two and the ends of each half sewn together. The plain edges of the two sections are then sewn and the border appears at the top and bottom of the simple tubular garment.

283 [824] *Hafotra* is a bast obtained from three different species of trees. All the Madagascar tribes use it for cordage, but its use for cloth is now limited to the Tanala and some of the neighboring Betsileo. The Imerina and Bara also made *hafotra* cloth in early times. The best *hafotra* is obtained from the *hafotra potsy*, inferior grades from the *hafotra keoka* and *hafotra ambany akondro*. *Hafotra potsy* is cream colored when prepared, the other varieties light gray. Trees 2 to 3 inches in diameter are cut into 4-foot lengths and the hard outer bark scraped away. The inner bark is then split lengthwise [462] and taken off in a single sheet. This is done by men. The sheets of bark are taken to the village, where the women split them into ribbons about ½ inch wide. The bark is then boiled with water and wood ashes for about two hours and the mixture left standing for a day. It is then washed in running water and, while still wet, is picked into fibers suitable for thread. After this it is washed again, being kneaded on stones with the feet. It is wrung out and dried for a day in the house, never in the sun. A bundle of the still damp fiber is then hung on a hook or threaded through the links of a wooden chain (Fig. 16, e). The operator seats herself on the ground or on a low stool and bares her right thigh. The bundle of fiber is hung beside her, at about the level of her head. She draws down the fibers one by one and rolls them between the palm and the thigh, knotting on new fibers as needed. The finished thread is wrapped around two sticks set in the ground about 2 feet apart. When enough has been rolled to make a hank, it is removed from the sticks and laid aside to be dyed.

386 Even at the present time, only vegetable dyes are used for *hafotra*. The favorite color is blue, *engitra*, which is made as follows: Indigo is pounded to powder in a mortar and dried. Banana stalks and a plant called *ambiaty* are also pounded and dried, then mixed with dried grass of the variety called *tsipontina* and the whole burned to ashes. The ash and powdered indigo are thoroughly mixed in hot but not boiling water. The yarn is put in and left over night, while the mixture cools. It is taken out, wrung dry, then put in again and left for a day. After this it is washed in running water and dried in the house, never in the sun. The same solution is used

1: Linton E-5 (1926-27) 1933 FY8 Tanala FY8

286

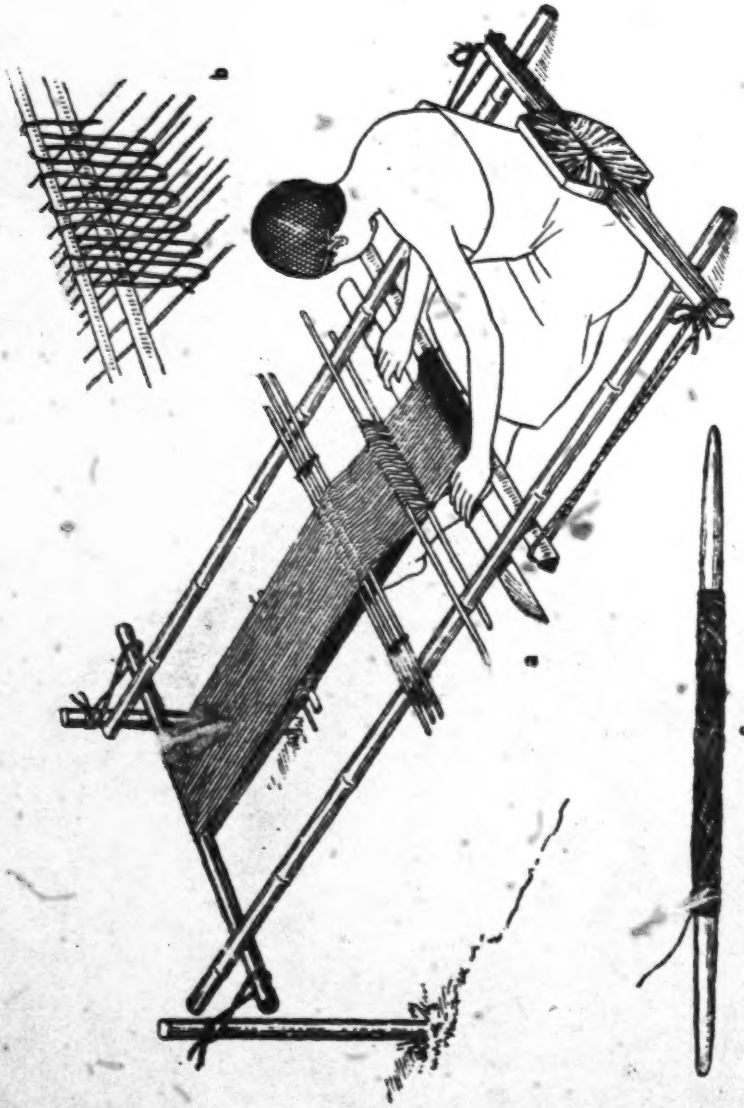

FIG. 12. Loom for *Hafotra* Weaving. a, Loom; b, Detail of *lasah*; c, Shuttle.

1: Linton E-5 (1926-27) 1933 FY8 Tanala FY8

386 for several successive dyeings, each of which gives a lighter color. The first dyeing gives a good medium blue called *lohony* ("head"). The second gives a lighter grayish blue called *atony* ("neck"). The third gives a greenish gray called *heringy* ("back") and the fourth a still paler greenish gray called *farindasa* ("tail"). The *lohony* shade is the most prized.

[824] A brownish red called *vony* (lit. "yellow") and a dull brownish purple (*esa*) are made with the bark of the *nato* tree. The bark is cut into small pieces and boiled with the yarn for one to two hours each morning and evening, the mixture being kept warm between boilings. Water is added from time to time. This is kept up until the right depth of color is obtained, which takes two to three days for the *vony* and four or more for the *esa*. The yarn is then washed in running water and dried. Yellow is made from turmeric, the process being the same as for raffia, and black from a mixture of tannin and ferruginous earth. The tannin is obtained from several plants, including the young leaves of the eucalyptus. Differential warp dyeing and the use of threads of mixed color are unknown.

●286 The loom used for *hafotra* weaving (Fig. 17, a) differs in some respects from that used for raffia. It is identical with the ancient Betsileo loom, which has recently been replaced in that tribe by looms of Imerina type. The warp is continuous, as in the raffia loom, but the beams are semicircular in section and are grooved at the ends to receive the tension ropes. They are usually made from the midribs of raffia palm leaves. The warp beam is tied to two low posts at a height of about 2½ feet but the breast beam is attached by short ropes to the ends of a wooden back rest (*tevoho*). Along either side of the loom there is a long bamboo pole one end of which rests on the warp beam and the other on the ground. These poles support the ends of the *tevoho*, the laze rods, and the heddle rod. Instead of being horizontal, like the raffia loom, the whole apparatus slants downward toward the weaver.

The heddle rod is much slenderer than that of the raffia loom, about ½ inch in diameter, but is also round. A continuous alternate leash of *hafotra* cord is used (Fig. 17, b). The shed stick is round and about ¾ inch in diameter. The laze rods are made of wood and are somewhat heavier than the heddle rod. Three of them are inserted a short distance beyond the shed stick, their ends being tied together with cord. The shuttle is a plain, blunt-pointed stick about ½ inch in diameter and 14 inches long, about which the thread is wrapped spirally (Fig. 17, c).

1: Linton E-5 (1926-27) 1933 FY8 Tanala FY8

The weaver sits flat on the ground with her legs extending forward under the loom and maintains the tension by leaning against the back rest. The position is tiring and the Betsileo give this as the principal reason for their abandonment of this type of loom. The weaver first inserts two laze rods, made from very thin splints of bamboo, then, when two or three threads have been woven and loosely beaten in, a strip of bamboo about an inch wide is passed through the warp and used as a base for beating in the rest of the weft. Each time the counter shed is to be formed, the heddle rod is slipped off the bamboo poles, the weaver releasing the tension by leaning forward. 286

When the cloth is nearly finished, narrow bands of very simple design are sometimes woven across the strip to serve as borders for the completed garment. In making these bands, needles, or simply the fingers, are employed, never the shuttle. The weft threads are carried across in pairs, passing over and under different numbers of warp threads. Twining is sometimes used in addition to true weaving. After the border has been made, the ordinary weaving is continued for an inch or more. The remaining warp is then cut and the cloth removed. The edges are turned in and sewed, to prevent raveling.

Newly woven *hafotra* cloth is stiff and harsh to the touch, and the colors appear dull. Before wearing, it is taken to a stream and beaten on a smooth stone with a cylindrical wooden club (Fig. 16, f). During the beating the cloth must be kept very wet and, if the water is too cold, the threads will not felt properly and may break, making holes in the fabric. Cloth that has been properly beaten has a smooth, glossy surface and bright colors. It is cold and somewhat slippery to the touch, like linen. The beating is always done by women. [462]

Hafotra cloth is principally used for *lambas* ("mantles") but loin cloths were formerly made from it and a few belts are still manufactured. *Lambas* are made from two strips of cloth sewn side by side. At least 90 per cent of these show the same general pattern. The ground color, called *aditra*, is made from one of the shades of indigo. On this are arranged narrow stripes of red, purple, yellow, natural color and, if the ground shade is light, dark blue. A stripe of natural color is called *famotsy*, and a line of it *famotsy kely*. The other stripes go by their ordinary color names. Stripes of mixed color, always along one edge, are made by introducing alternate light and dark warp threads. In *lambas* of this pattern 286 291

1: Linton E-5 (1926-27) 1933 FY8 Tanala FY8

286 291 the weft is always dyed red. The only variations from the pattern which were seen were several specimens made entirely of undyed *hafotra* and a single specimen which had four widely spaced stripes of combined blue and yellow on a ground of natural color.

531 286 The Tanala, like most of the Madagascar tribes, display extraordinarily good taste in the combination of colors. Even when glaring aniline dyes are used their compositions are almost always pleasing. The outstanding feature of their textile design is the use of narrow lines at the edges or in the body of their stripes. If the stripe and ground are both fairly light in color, the stripe will be edged with a black or very dark line. A wide dark stripe will have a few lines of light color incorporated. These lines are invisible at a little distance but give emphasis to the whole. Delicate shadings are also produced by lines of graded color. In one specimen a stripe is composed of three yellow threads in the center with two black threads, two dark blue, two light blue, two red and two white on either side.

CORDAGE

283 The best native material for cordage is raffia. Long ribbons of this fiber, just as it is striped from the leaf, are used for all the purposes for which we employ light string. Heavier cord is made from twisted raffia in two strands. The strands are rolled between the palm and the bare thigh, the maker rolling first one strand and then the other and allowing the two to twist about each other. New lengths of fiber are rolled in as needed and the work proceeds with great rapidity. Heavier rope is usually braided from bundles of the untwisted fiber in a three-strand plait. Rope an inch in diameter can be made in this way. It is soft, light and extremely strong, but is rarely used at present because of the commercial value of the raffia.

[824] Inferior rope and cordage are made from the inner bark of various trees, called *hafotra*. The use of this material in weaving has already been described. In rope making the fiber is boiled, shredded and cut into pieces 4 feet long. The rope is braided in three-strand plaits from bundles of these. New pieces are introduced a few at a time, so as to keep the rope of uniform size and strength. *Hafotra* ropes are light and soft, but do not wear well. Small cordage is rarely made from it.

Strips of fresh bark are frequently used in place of string. Permanent lashings are usually made from split vines, while large vi